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UTCS ComputerNews

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Lets Talk About It: The Demise of the DECsystem-10 and The Introduction of a General CMS Service

Gentle reader: Recently I sent a letter to all DEC-10 users announcing that we would stop the service as of July 19, 1985. The letter is reprinted following this article. When we kill such a faithful old warhorse (and for a while, a cash cow) as the DEC-10, we need a pretty good reason, and you need to understand what it is as well.

Last year we set rates for all our services which were based, to the best of our knowledge and analysis, on the true costs of the services and the projected use we expected. Rates for most of the components on most machines went down. This was largely coincidental since the previous rates were not based on anything particularly relevant anyway.

Rates for the DEC-10 increased, while most others dropped. We should reiterate that rates were not set on the DEC-10 to discourage its use, but only to recognize true costs.

The amount of money distributed to users was based on overall income projections based on the rates and usage of all machines. The aggregate amount of money, applied in the appropriate proportion to each machine, would buy the same amount of computing as last year on each machine. However, for it to do so on a detailed basis would mean that the amount which trickled down to DEC-10 users would have had to be a greater proportion compared to users of other services. Since money was distributed only to the faculty level, this degree of fine tuning was left to whoever split the money up in the faculty.

A number of things seem to have happened. Since the fine tuning required was pretty detailed, I suspect in many cases it simply did not occur. Whether it did or not, many DEC-10 users probably decided to shift to a more cost-effective solution for their problems. Whatever the reason, the usage on the DEC-10 has plummetted.

At our present rates, the revenue from the DEC-10 will come nowhere near covering its costs. A suggestion was made that we raise the rates, but this would undoubtedly just drive users away even faster. Our only choice, other than continuing to incur a loss (and a bottom line deficit) and hence drastically subsidizing the present remaining users, is to simply stop offering the service. Remember, in the real money world, no one makes up our deficits!

We will be offering a new service which can pick up some of this residual load. It will be a fully supported expansion to the VM service we now offer on the IBM partnership machine, but on a different computer. If all goes well, we hope to be able to replace the 3033/U16 with an IBM 4381/P02 (about half the size of the U) in late April 1985. We do not have the service totally specified yet, but its design intent is to:

1. Emphasize the interactive aspects under CMS.
2. Simplify
   a) access to IBM services
   b) interaction with data.
3. Be biased toward foreground (more or less immediate, while you are logged

continued...

Let's Talk About It continued

on) execution of short tasks, with an implicit penalty (at the expense of response) for foreground execution of longer tasks.

4. Have very lean, straightforward accounting.
5. Provide some ability to let users limit the use of resources, subject to point 4. above.
6. Ultimately offer most of the application packages available on our MVS based service.

Our thoughts are to encourage the use of CMS. We expect an increase in CMS usage will probably decrease MVS usage. We hope to have a flexible machine configuration so as to be able to adjust the resources available for the CMS and MVS environments as appropriate.

Warren Jackson

Text of the Director's Letter

Effective July 19, 1985, UTCS will stop offering services on the DECsystem-1090. Effective immediately UTCS will stop opening accounts (except for courses which terminate by April 1985).

The remainder of this article will explain why UTCS has been forced to take this action, what alternative systems are available for DECsystem-10 users, and to what degree UTCS will assist in conversions to other systems.

Why the DECsystem-1090 will be Discontinued

In May 1984, the University of Toronto monetized computing at UTCS. This action required the adjustment of rates for services on all UTCS systems to reflect more accurately the cost of these services.

This action resulted in a moderate rate increase for the DECsystem-10 but caused the usage on the DECsystem-10 to decrease rapidly. It became clear to UTCS that revenue would not recover the cost of hardware maintenance, software and personnel support.

In addition, there have been indirect indications that Digital Equipment Corporation would like to reduce support on DECsystem-10s and 20s (in favour of their VAX line).

With the annual University budgeting process underway, UTCS was left with two options; increase the rates to a level such that costs would be recovered even with declining usage, or discontinue the service. The effect of the May '84 rate increase was to reduce usage by 40% over the same period in the previous year. Clearly the first option would not solve the problem.

Alternatives to the DECsystem-1090 Service

DECsystem-10 usage falls into two broad groups: text processing and numerical processing.

Text Processing

The text group comprises those who are using SOS or TECO in combination with SCRIBE or RUNOFF to produce formatted documents, such as letters, reports, theses, and class notes. UTCS is able to offer two alternatives to these users.

The first is to move to the General Purpose (GP) UNIX service. Since UTCS is acquiring the SCRIBE package for GP UNIX, those currently using SCRIBE might find this an attractive option. Those still using RUNOFF should consider moving to SCRIBE or to the standard UNIX formatter NROFF/TROFF.

In both cases, users will have to learn

continued...

Director's Letter continued

enough about the UNIX command language to be able to manage their files. Users would also have to learn how to use ED, the standard UNIX text editor, to be able to create and edit their files. UTCS is currently prepared to provide courses on the use of the UNIX editor and NROFF/TROFF or SCRIBE.

The second alternative is to move into the IBM interactive environment under CMS. The IBM Document Composition Facility (DCF) will be available for CMS. Users will have to learn enough about the appropriate interactive environment to be able to create, edit and manage their online files. CMS offers fullscreen editing for increased productivity. Presently, UTCS courses on CMS are not available but are being prepared.

Users might also consider moving to a microcomputer system. The FinalWord, a SCRIBE-like package is available for the IBM PC and equivalents. There are many other good word processing packages available for several makes of micro systems. In many cases, users have the ability to download their files from the DECsystem-10 to micros (the more popular brands) using the UTCS File Transfer Facility (FTS). John Bradley of the Humanities Support Group (978-3995) or Paul Roth of the Micro Support Group (978-8701) can be contacted if users see this as a likely alternative to the DECsystem-10.

Numerical Processing

Users of FORTRAN, APL, or statistical packages will probably find that most of their requirements can be addressed with existing packages and software on the IBM system.

It is difficult to make a general statement as to how much work would be required to convert from the DECsystem-10 to the IBM. Programs written in FORTRAN could be converted with a minimum amount of effort. For packages written specifically for DEC equipment, such as MLAB (a statistical package) or EMPIRE (an economic modelling package), there are currently no directly equivalent packages in either the IBM or GP UNIX systems. Users who wish to continue using these products on UTCS mainframes, should contact the product vendors to see if other versions are available for either IBM or UNIX systems.

If you wish to discuss alternatives further, or have questions in general, please contact Mr. Ihor Prociuk (978-6875). Ihor will either be able to assist you himself or arrange appointments with appropriate staff members.

Postscript

Change is the only certainty in the computer industry. This applies not only to mainframes but (at an ever increasing rate) to micros. As part of its mandate to run cost-recoverable services, UTCS must always be prepared to take advantage of hardware and/or software that would keep our cost down while maintaining a good level of service to our user community. Under such constraints it is inevitable that situations such as the one occuring with the DECsystem-10 arise.

We urge DECsystem-10 users to contact the UTCS staff mentioned elsewhere in this letter if they require assistance or need more information. UTCS will keep users informed of all pertinent deadlines via our usual BROADCAST, HOTNEWS and *COMPUTERNEWS* facilities.

Dr. Warren Jackson
Director

Research Year-End

The fiscal year-end for most research grants, especially those issued by NSERC and MRC (3-500-NNN-NN to 3-699-NNN-NN), is March 30. However, in order to complete accounting to the granting agencies by that date, the final date for billing computing services to an Encumbrance Memo will be Monday, March 25.

To ensure that all charges for services to come off the grant are billed prior to the cancellation of the Encumbrance Memo, researchers should arrange for service completion or purchase of supplies as early in March as possible. This includes making sure that jobs are cleared from the system HOLD queues. If jobs in the queues are not printed or purged until after March 30, the researcher will continue to be liable for the charges.

When an Encumbrance Memo is cancelled and there is no other source of funding such as a departmental subsidy, the entire account's allocation is removed, the account is locked, and service is suspended. A new Encumbrance Memo should be received by UTCS **no later than March 21** if service is not to be interrupted.

An Encumbrance Memo based on "-90" funds is not affected by this deadline.

For additional information on accounting procedures, please obtain a copy of the UTCS GUIDE TO PRODUCTS AND SERVICES: Accounting, available from the UTCS Information Office, Room 206, Engineering Annex.

Copies of the Encumbrance Memo form will be available from the UTCS Accounting Services Office, Room 337, McLennan Laboratories.

Marg Doherty

Data Entry Service

The Data Entry Service is part of Business Information Systems, located at 215 Huron Street, 4th Floor, Room 406. We supply an efficient, comprehensive data entry service to the University community. We are already serving many departments, faculties, hospitals, UTCS users and nonprofit organizations.

Any potential user is welcome to view our installation, where a variety of documents can be processed, even questionnaires and labels. We also assist in preparing jobs for data entry on our system. Our data entry operators are experienced, fast and accurate, maintaining an error rate of less than 2% for verified work.

Data are entered on Sperry-Univac Cade 1900 equipment, which is a key-to-disk computer system with such editing features as table look-ups, subroutines and arithmetic computations. Once entered, data can be transmitted to most UTCS computers. The output medium can be a disk or tape file on a mainframe, a floppy disk (5 1/4") for a personal computer, or print.

Do you have a personal computer but no time to enter data yourself? Data entry for personal computers is a new service, available now. Let us send one of our operators to do your data entry for you, on your own machine. Alternatively, we can enter data you bring us and put it on a floppy disk (5 1/4") compatible with the IBM PC. Or, you might prefer to have it transferred to a UTCS computer, where you could edit it and then download it yourself. The choice is yours.

For more information, please contact Zelda Anderson at 978-3023 or Betty Chan at 978-5273 between 9:00 a.m. and 4:00 p.m.

Zelda Anderson

Microcomputer News

We are now obtaining the hardware and software necessary for the institution of the **UTCS Bulletin Board System** (BBS). This service will run on an IBM PC-AT, and is expected to be free, for the U of T community only. Initially, the system will be available to one user at a time, and we will probably limit access time to perhaps 15 minutes per session. The time limit may change later on if the system goes multiuser. The BBS is aimed at microcomputer users, but access will be through PACX, and thus it could be accessed via public terminals as well. We will attempt to restrict it, however, to microcomputer users. The software will be RCP/M, modelled after other RCP/M BBS's as at York University and other places. Hopefully the BBS will be in place by this spring.

Several more machines have arrived at the **Micro Lab** for evaluation:

1. Sanyo 555: an inexpensive, dual-floppy, MS-DOS machine.
2. Ericsson PC: a Swedish-made PC-compatible, single floppy plus hard disk system.
3. Texas Instruments Professional: dual-floppy, MS-DOS machine.
4. Eagle XL: portable, hard-disk, PC-compatible system.

Over the coming months we expect to evaluate these machines properly, particularly with a view towards IBM compatibility. If you would like to try out any of your software on one of the machines in the Lab, please call us for an appointment, at 978-4597, 5071, or 8701.

We have also been evaluating several new pieces of software:

1. Personal Bibliographic System: a bibliographic database manager for the IBM PC.
2. Samna III: word processing software for the IBM PC.
3. Volkswriter Scientific: a new technical word processor for the IBM PC, with enhanced special character abilities.
4. Proofwriter International: another technical word processor for the IBM PC.
5. Academic Font: an Edix/Wordix special character handling word processor for the IBM PC.

We hope to publish the **Academic's Guide to Purchasing a Microcomputer System** this spring. It is intended to be an aid to U of T community members needing advice on how to go about selecting appropriate micro hardware and software. Reviews of several micros and micro software packages will be included, and additional reviews or evaluations will be added from time to time, as they become available. We have put considerable effort into this document and expect it to be well received by our users.

User Group Meetings for the rest of this term have been scheduled, with proposed featured topics, as below:

- CP/M Users Group
  (all times are 7:00-9:00 p.m.):

  Monday, February 18, Faculty of Nursing, 50 St. George St., Room 52: Data Managers.

  Monday, March 18, Medical Sciences Building, 1 King's College Circle, Room 3268: CP/M as a System.

  Monday, April 15, Faculty of Nursing, Room 52: (High-Level) Languages.

  Monday, May 27, Faculty of Nursing, Room 52: Assembly Language.

- IBM PC [and compatibles] Users Group
  (all times are 4:00-5:15 p.m.):

  Tuesday, February 26, Galbraith Bldg., 35 St. George St., Room 412: Scientific Graphics.

continued...

Microcomputer News continued

Tuesday, March 26, Galbraith Bldg., Room 412: IBM Advanced Graphics Adapters; or Digital Research's GEM (icon-oriented front-end for DOS).

Tuesday, April 23, Galbraith Bldg., Room 202: Networking (3COM or PC-NET); or REFLEX (database manager).

Tuesday, May 28, Galbraith Bldg., Room 202.

- APPLE Users Group

Wednesday, February 6, 7:00-10:00 p.m., McLennan Physics Bldg., 60 St. George St., Rm. 111 (Physics Lounge): Informal Meeting.

<Future meeting dates were unavailable at press time, but the APPLE group usually holds a general meeting once a month, with a separate informal meeting once a month as well.>

Users who are considering the use of **expansion cards** for an IBM PC, might be interested in an article written by David Hillock, Dept. of Social Work. It describes how to avoid installation problems when a Paradise Modular Graphics Card, the IBM Monochrome Display Card, and Quadram's Quadboard are to be used simultaneously. Each card can easily be installed separately, but problems arise when adding the second and third cards, in that the nature of their interaction with previously installed cards is not documented in the installation instructions.

Copies of David's article are available at the Information Office, or from the Microcomputer Support Group.

Paul Roth

GP UNIX Networking

One of the advantages of UTCS' new GP UNIX service is that it connects to a range of communication networks, including local area networks (highspeed), uucp networks, and USENET, the international network of UNIX sites. (See next article.)

The best way to transfer files from GP UNIX to most U of T and other UNIX sites is by using the electronic mail facility. Mail is intended to transfer text files; use *uuencode* to send binaries by mail. This network is undergoing continuing evolution, so the material here should be taken as guidelines rather than exact fact.

Mailing to a U of T Site

Most U of T UNIX sites are connected to one or another of several highspeed networks. To send mail to a Professor Gorblix on the "c" machine at Engineering Computing Facility, for example, type:

```
Mail gorblix@utecfc
```

Then type your message and an EOT (usually CTRL/D). If you want to send a file, e.g. chapter1, type:

```
Mail gorblix@utecfc<chapter1
```

continued...

GP UNIX Networking continued

To receive mail, type:

```
Mail
```

and "s" (save) the incoming message and files onto disk.

Lowspeed Links

To send mail to sites which are not on the highspeed nets, you must work out a "uucp" path to the machine. To send mail to Professor Dinlies at the Zoology department, for example, type:

```
Mail utzoo!dinlies
```

Directory Service

How do you find out the account names for people at U of T sites? Many of these sites cooperate in giving us names of account holders. The data is stored online, so you need only type:

```
nicname dinlies
```

to find out any UNIX accounts that we know of.

Remote Copy (RCP)

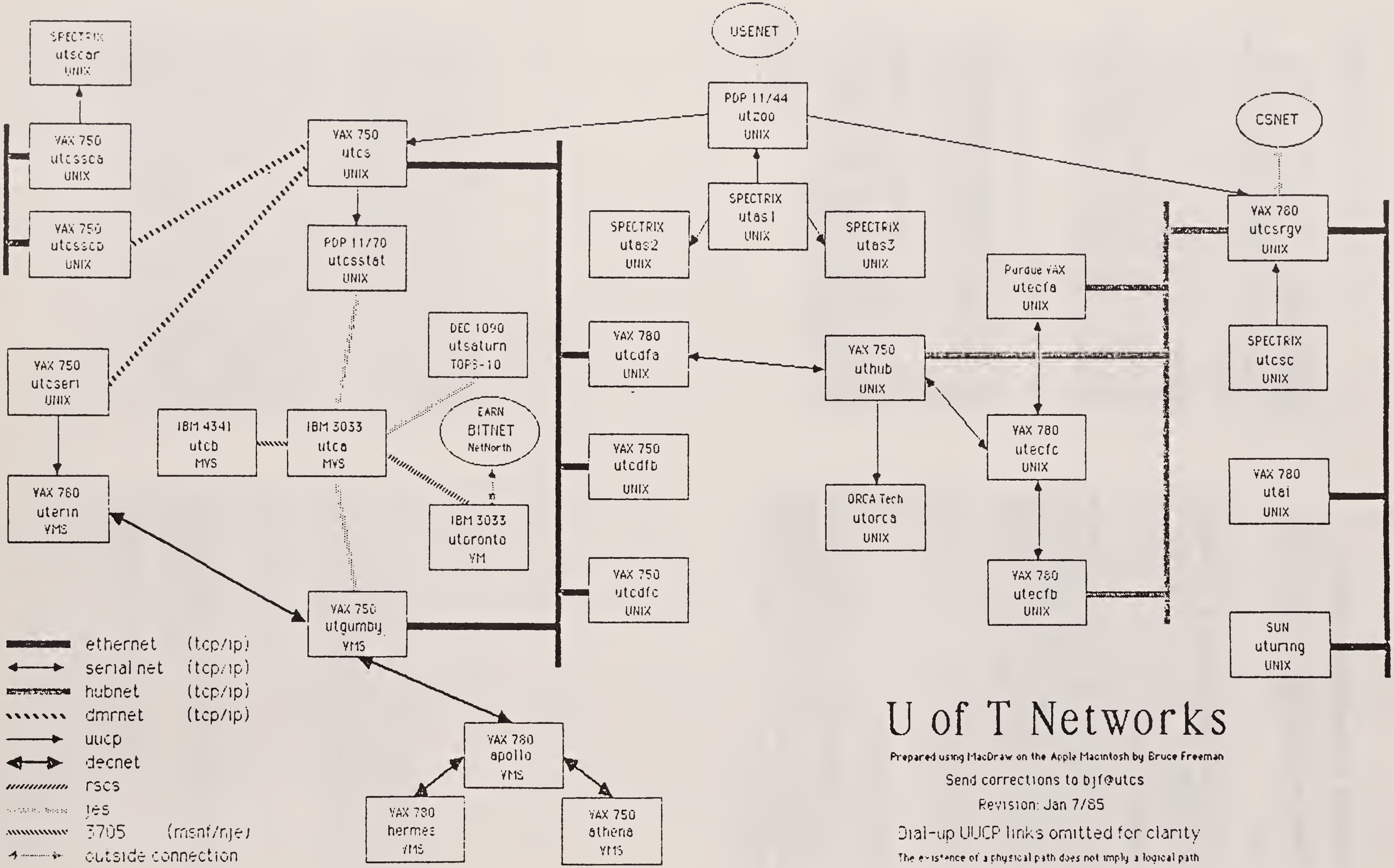
For sites on the highspeed networks, the *rcp* program may be used to copy files. See the online manual pages for details.

Network Topology

The network configuration changes quite often, and for this reason it is not described here.

A list of sites on the highspeed networks can be obtained by examining the file /etc/hosts; *uucp* sites are listed in /usr/lib/uucp/map/localsites.

Ian Darwin



U of T Networks

Prepared using MacDraw on the Apple Macintosh by Bruce Freeman

Send corrections to bjf@utcs

Revision: Jan 7/85

Dial-up UUCP links omitted for clarity

The existence of a physical path does not imply a logical path

A Computer Grapevine

Most people wouldn't consider discussion of spacecraft design, computers and ethics, reviews of computer software, and the latest jokes as junk mail. But these are only a few of the 200 or so daily topics available to a computer buff who has access to a relatively new electronic network called "USENET."

The USENET software was originally written to exchange information on "bugs" (problems) in UNIX, a basic computer-running system commonly used on everything from tabletop IBM PCs to more complex university machines. But USENET provided such flexibility that new topics, or "newsgroups," were continually added for discussion. Today, movie reviews (and sneak previews!), up-to-date progress reports on Space Shuttle launches and advice on how to handle a two-year-old's temper tantrum join UNIX bug "fixes" (reports), improvements and new programs on the USENET network, flung out to people around the world. "We are currently evaluating additional small computer systems....., and posted evalutations, comments and criticism [on the net] help us compare the different choices on the market," says Michael Ghesquiere, in the computing systems group at Microtel Pacific Research Ltd. in Vancouver, of one helpful aspect of USENET.

This evolutionary use of computer communication combines elements of electronic mail, bulletin boards, Athenian democracy and the want-ad section of the daily paper. You get started by giving the computer a simple command to begin "reading news" in those groups that look intriguing. When you read an article of particular interest to you, you have the option of either sending private electronic mail directly to the sender or posting a public "follow-up" article for all to see. With an estimated 10,000 readers on the network, controversial statements are unlikely to go unanswered. And occasionally a "flame" -- a torrid, sarcastic reply -- will come your way if you arouse someone's ire.

USENET is linked to other large computer networks such as ARPANET, CSNET, BITNET and DEC-ENET, which are the information sources of special-interest groups such as scientists, the military or engineers. The collection of these networks is called "worldnet" by some, who hope this vast interconnection of minds will eventually provide the entire world with access to the intelligence and information on USENET today.

The other networks have their own administration, rules, costs and central data bases. USENET, being more grassroots, has no central administration, few rules other than "don't hurt thy neighbor or the net itself" and "no commercial ads," and few costs. There's no cost to join since USENET is "public domain software," but you must have a computer system running UNIX and someone who already gets news to "feed" it to your computer. You will also be asked to share any long-distance costs involved in getting the news brought into your area (a proposal to deliver USENET news via satellite will reduce these costs).

In his 1958 work, *Darwin's Century,* popular-science author Loren Eiseley wrote that "the thinkers of the eighteenth century were devoted to their correspondence. Much of what today goes quickly into scientific journals passed back and forth in letters and often did not formally emerge for decades." USENET represents a return to that kind of informal, small-scale discussion.

Ian Darwin

Reprinted from *The Financial Post Magazine,* September 1, 1984.

SCRIBE on GP UNIX

As an alternative for those wishing to use SCRIBE after the DECsystem-10 is discontinued, UTCS will be offering SCRIBE on the GP UNIX machine. The new SCRIBE will support as far as possible the same set of output devices currently supported on the DECsystem-10 version. In addition, GP UNIX SCRIBE users will be able to produce "pseudo-typeset" output on the 8700.

Please contact John Bradley (978-3995) or Pat Hood (978-4548) for more information.

John Bradley

8700 Font Changes: Make Your Suggestions Now!

For a short period of time UTCS will be testing a software package for making changes to the fonts on the 8700 laser printer. As test material, UTCS would like to make corrections or enhancements to the 8700 fonts. Users interested in seeing specific changes implemented should contact John Bradley at 978-3995 with their suggestions.

Patricia Hood

NAg Mark 11

The Mark 11 version of the NAg library is now available for testing in APPL.MATH.NAG11LIB on the IBM MVS system. It is scheduled to go into production on March 4, 1985, at which time the library dataset will be renamed to APPL.MATH.NAGLIB, and the current Mark 10 library will become APPL.MATH.NAG10LIB. At the same time, the older back version, Mark 9, will be removed from the system.

Only one routine is being withdrawn: D01FAF, which does multidimensional quadrature over a hyperrectangle using the Monte Carlo method, has been replaced by D01GBF. Improvements in efficiency have been made in 53 routines, and various bugs have been fixed.

There are 29 new routines in the following areas:

- C06 - 4 Fast Fourier Transform routines
- E04 - routines for linear and quadratic programming and nonlinear minimization
- F01 - 3 matrix factorization routines
- F02 - 2 eigenanalysis routines for sparse systems
- F04 - 8 routines for the solution of simultaneous linear equations and linear least squares problems
- G13 - 8 multivariate time series routines
- S19 - 4 Kelvin function routines

Scheduled for withdrawal at the Mark 12 level are C06ACF and C06ADF, E04VAF, E04VBF, E04WAF, E04ZAF, E04ZBF, and all 4 routines in H01 and H02AAF. All of these routines have been replaced by new routines mentioned above.

Documentation on the NAg routines can be found in the UTCS Information Office, Room 206, Engineering Annex. As well, the dataset APPL.MATH.NAG11DOC contains two useful members: INDEX, which provides a concise summary of the Mark 11

continued...

NAg Mark 11 continued

routines, and NOTES, which supplies implementation-dependent details. The most common problem encountered by new users of the NAg library is in the declaration of variables. UTCS has only the double precision version, which means that most variables must be declared DOUBLE PRECISION (REAL*8) in the calling program. NOTES gives the correct interpretation of the italicized terms in the Library Manual.

If you have any questions or problems with the NAg library, please call Advising Services at 978-HELP.

John Roth

SPSS Regional Meeting in Toronto

The International SPSS Software User's Exchange (ISSUE) is planning a regional meeting for Toronto on April 15 and 16. The head of the organizing committee is Tim Daciuk, of Ryerson Polytechnical Institute's Academic Computing Services. In order to find out how many people might be interested in attending the meeting, and what topics should be discussed, a preliminary survey was recently mailed to SPSS sites in Ontario, Quebec, Michigan, New York, Pennsylvania and Ohio. To make sure that all interested SPSS users at UTCS were covered, a copy of this survey was mailed to over fifty people in mid-January. If you did not receive a copy, and would like more information, please call Diane Mitchell at 978-5128, or Tim Daciuk at 979-5000 ext 6833. Watch for a detailed conference agenda in the next issue of *COMPUTERNEWS.*

Diane Mitchell

TECHNOTE

TECHNOTE is a new facility on the IBM MVS system; it contains a series of files (called Technotes) pertaining to UTCS' current events. These notes contain helpful hints, suggestions, new procedures, and new policies. TSO, WYLBUR, and Batch users can access TECHNOTE which is designed on the same lines as the DOCUMENT facility.

TECHNOTE was introduced to accommodate occasional announcememts which generally appear in HOTNEWS, the WYLBUR 'DO NEWMVS' and TSO 'NEWMVS' general commands. They should provide the user with fast, easy access to current information. Technotes do not replace or enhance UTCS documentation. They are short term notices, sometimes taken from *COMPUTERNEWS* Articles, but more often rapidly prepared and input by UTCS Consultants. Any material in TECHNOTE that is required beyond the short term will find its way into the relevant UTCS documentation after proper editing by the Publications Group.

For more information on TECHNOTE, type

```
HELP TECHNOTE     on TSO
DO TECHNOTE ?     on WYLBUR.
```

If you have questions or problems please call Advising Services at 978-HELP.

Elizabeth Weitmann

APL Fileprint Service Discontinued

As mentioned in the July/August issue of *COMPUTERNEWS,* UTCS is discontinuing support for the workspace 1 FILEPRINT. By this time, users should have all their programs that used FILEPRINT converted to the new HSPRINT facility in workspace 1 HSPRINT.

HSPRINT is a superior product that allows more control over print requests and is fully supported by I.P. SHARP, the supplier of our APL software. HSPRINT can also be used to print APL files on the 8700 laser printer (see the September 1984 issue of *COMPUTERNEWS),* which provides high quality/low cost printing of APL files, using the complete APL character set.

If you have not already converted your applications to HSPRINT from FILEPRINT, please note that there will be some work required whether or not you used the format control functions in the FILEPRINT workspace.

Documentation is available in *SHARP APL Technical Notes SATN-2* and *SATN-8,* available from the Information Office, or in the workspace 1 SATN. For information on how to use HSPRINT, sign on to APL and type:

```
)LOAD 1 HSPRINT
DESCRIBE
```

Any users who encounter difficulties in converting their applications from FILEPRINT to HSPRINT should contact Advising Services at 978-HELP.

Paul Shindman

VS COBOL 2.4: UTCS PRODUCTION COBOL

UTCS has upgraded its production COBOL to Release 2.4. This processor has some signficant new IBM extensions to the COBOL language involving the Report Writer, the PASSWORD Clause, the TRANSFORM, and the ENTRY statement. There are also extensions and modifications to the language to make it easier to use.

Those with a significant interest in COBOL are urged to obtain and study the IBM reference, *IBM VS COBOL for OS/VS* (GC26-3857-3). This manual is available for reference at the Information Office.

Herb Kugel

Card Punch Service to be Discontinued

On May 1, 1985, UTCS will discontinue the card punching service at the UTCS Central Site. This service has been used less and less over the past year, and usage is now so low that the cost of providing the service is several times higher than the revenues it generates. The declining demand for this service is related to the continuing trend toward the use of online systems rather than cards.

Please note that the termination of the Central service does not affect the keypunches and card reader located at the Engineering Annex Site.

Users may make an appointment with a UTCS consultant to discuss alternatives to the use of cards by calling Advising Services at 978-HELP .

Bob Chambers

Paper Tape Service Discontinued

UTCS discontinued its paper tape reading/punching service as of February 1, 1985. The paper tape reader and punch had been idle for at least six months, and there had been no transactions affecting the paper tape library for an even longer period.

Anyone who has paper tapes in our library and wishes to retrieve them is requested to contact the Tape Librarian in Room 368 of the McLennan Laboratories at 978-7319.

Bob Chambers

UTCS Noncredit Short Courses

UTCS offers a number of short, noncredit courses on the use of various products and services that we support. These courses are available to students, faculty and staff of the University of Toronto, as well as to other users of our system. Complete course descriptions for these and other noncredit courses offered at UTCS are available at the Information Office, Engineering Annex, Room 206, and at the Accounting Services Office, McLennan Labs, Room 337.

All short courses are held in the UTCS Education Facility, Room 221, McLennan Physical Laboratories. Due to the limited seating capacity in the Education Facility, and the number of terminals available for our hands-on courses, registration is required for short courses.

Please note that we reserve the right to cancel courses, if registration is too low.

Anyone interested in taking any of these courses must register in person with:

Educational Coordinator
Engineering Annex, Room 207
978-4565

A nonrefundable Administration Fee of $10 per course is due at the time of registration. It may be paid by cash, cheque or on a Customer Account Number (CAN).

(Anyone interested in credit courses should contact the Dept. of Computer Science at 978-6360).

The following courses are offered in February:

SAS/TSO101 - Introduction to SAS/TSO

Date: February 11-22, 1985 (Mon.-Fri.)

Time: 10:00-12:00 noon

TXT/UNIX101 - NROFF and TROFF on GP UNIX

Date: February 25-March 1, 1985

Time: 9:30-12:30 p.m.

TXT/UNIX203 - TBL PROGRAM on GP UNIX

Date: February 5 & 7, 1985

Time: 9:30-11:30 a.m.

Irene Rosiecki

Change Committee

Changes to TSO/WYLBUR

1. The BANNER command was added to TSO on November 25; this allows users to identify their printed output more easily.
2. Dataset compresses were made available from menu 3.1 in PDF on November 20.
3. Release 7.0 of WYLBUR became the production version on January 7, after a successful period of testing.
4. A new facility called TECHNOTE was installed on WYLBUR, TSO, and GPJS on December 5. This facility provides users with access to technical notes on upcoming changes to these services.

Changes To Other Systems and Services

1. GN trains at ASUT and at EAT were exchanged for TN trains on November 7.
2. The BACKLOG application and screen were removed from the EAT site on November 13.
3. A schedule of reduced rates for Class A jobs was established on November 22. These new rates apply to jobs submitted during unattended hours and holidays and between 24:00 and 06:00 Monday through Friday.
4. Additional functions were provided for the File Transfer Service (FTS) on the GP UNIX machine on November 19.
5. A mount charge was established for nonstandard print jobs on the 8700 laser printer from all systems on December 1.
6. A reconfiguration of Statistical Analysis Service UNIX on the PDP-11/70 machine was performed on December 1 and is expected to improve performance and maintainability.
7. Terminal access speed through terminal servers was increased to 9600 baud on December 5.

Joan Coutts

Personnel Changes

UTCS' new Manager of Internal Systems and Administration is **Ron Vander Kraats.** Ron has been with UTCS for six years in the position of Hardware and Communications Supervisor for the Communications and Technical Support Group. Congratulations!

Marg Doherty has been promoted to Budget Analysis Supervisor.

Dale Thompson, a Waterloo Co-op student, has joined Advising Services for the next four months.

Paul Kern has joined UTCS full-time as the Applications Programmer Analyst II at the Scarborough College Site. Welcome!

Sheila Brown, our former Senior Budget Analyst, has transferred to Office of Business Affairs.

Elizabeth Weitmann

New UTCS Documents

To print online documents on
- IBM
  - WYLBUR users type "do document"
  - TSO users type "help document"
  - APL users type ")LOAD I UTCSGUIDE<CR>HELP"
- DECsystem-10
  - use iprint or SOS/R command
- GP UNIX
  - use ipr or cat command

Recommended forms code for the 8700 is YXLE unless otherwise noted.

New UTCS Documents in hardcopy

UTCS Guide to Text Processing on GP UNIX

Previously announced:

UTCS GUIDE TO PRODUCTS AND SERVICES: Introduction
UTCS GUIDE TO PRODUCTS AND SERVICES: Basics
UTCS GUIDE TO PRODUCTS AND SERVICES: Accounting
UTCS Catalogue: Access, Part 1
UTCS Catalogue: Access, Part 2
UTCS Catalogue: Numerical Products
UTCS Catalogue: Storage
UTCS Catalogue: Text Products
UTCS Guide to Census Tapes
UTCS Guide to File Transfer Service
UTCS Guide to GP UNIX
UTCS Guide to Highspeed Printing
UTCS Guide to KERMIT
UTCS Guide to Mainframe File Transfer Facility
UTCS Guide to SCRIBE
The SOS Workbook

New UTCS Guides online

UTCS Guide to Text Processing on GP UNIX
  GP UNIX: /usr/doc/utcs/text
Recommended forms code is YXJE.

Previously announced:

UTCS GUIDE TO PRODUCTS AND SERVICES: Basics
  IBM: MANUAL=BASICS
  DEC: DOC:BASICS.DOC
  GP UNIX: /usr/doc/utcs/basics
UTCS Guide to APL
  IBM: MANUAL=APLGD
UTCS Guide to APL XFR
  IBM: MANUAL=APLXFR
UTCS Guide to Census Tapes
  IBM: MANUAL=CENSUS
  DEC: DOC:CENSUS.DOC
  GP UNIX: /usr/doc/utcs/census
UTCS Guide to File Transfer Service
  IBM: MANUAL=FTS
  DEC: DOC:FTS.DOC
UTCS Guide to GPJS
  IBM: MANUAL=GPJSX
  DEC: DOC:GPJS.DOC
  GP UNIX: /usr/doc/utcs/gpjs
UTCS Guide to Highspeed Printing
  IBM: MANUAL=PRINT
  DEC: DOC:PRINT.DOC
  GP UNIX: /usr/doc/utcs/print
UTCS Guide to IBM MVS Online Storage
  IBM: MANUAL=IBMDISK
UTCS Guide to KERMIT
  IBM: MANUAL=KERMIT
  DEC: DOC:KERMIT.DOC
  GP UNIX: /usr/doc/utcs/kermit
UTCS Guide to Mainframe File Transfer Facility
  IBM: MANUAL=MFTF
UTCS Guide to SCRIBE
  DEC: DOC:SCRIBE.DOC
  (For printing instructions, see page 1 of document.)
UTCS Guide to Series/1 Terminal Use
  IBM: MANUAL=SERIES
3270 Emulation:
  UTCS Guide to
    Cybernex APL100 and Volker Craig VC404 (MANUAL=CYBER)
    DM1520 (MANUAL=DM1520)
    Hardcopy Terminal (MANUAL=HARDCOPY)
    IBM 3101 (MANUAL=IBM3101)
    SOROC IQ (MANUAL=SOROC)
    VT52 (MANUAL=VT52)
    VT100 (MANUAL=VT100)
UTCS Guide to TFW.MAK in SCRIBE
  DEC: DOC:TFW.DOC
UTCS Guide to TSO (Draft)
  IBM: MANUAL=TSOGD
UTCS Guide to WYLBUR
  IBM: MANUAL=WYLINTRO
UTCS WYLBUR Tutorial
  IBM: MANUAL=WYLTUTOR
The SOS Workbook DOC:SOSWRK.DOC

Martha Parrott

Recent Acquisitions in the Computer Library

Andrews, Michael.
Programming microprocessor interfaces for control and instrumentation.
Englewood Cliffs, N.J., Prentice-Hall, 1982

Annual review of information science and technology.
1984, vol. 19.

Auslander, D.M. and Sagues, P.
Microprocessors for measurement and control.
Berkeley, Cal., Osborne/McGraw-Hill, 1981.

Blank, J. and Krijger, M.J., eds.
Software engineering: methods and techniques. Tr. from the Dutch.
New York, Wiley, 1983.

Boolos, G. and Jeffrey, R.
Computability and logic. 2d ed.
Cambridge, University Press, 1980.

Bowker, R.R., Co.
Computer books and serials in print 1984.
New York, 1984.

Brady, M. and Berwick, R.C., eds.
Computational models of discourse.
Cambridge, Mass., MIT Press, 1983.

Buchberger, Bruno et al, eds.
Computer algebra: symbolic and algebraic computation.
Vienna, Springer-Verlag, 1983.

Canadian Society for Computational Studies of Intelligence.
Proceedings of the 5th Biennial Conference, held at Univ. of Western Ontario,
London, May 1984.

Clinic on Library Applications of Data Processing, University of Illinois, 1983.
Proceedings of the 20th annual Clinic.

Dyer, Michael G.
In-depth understanding: a computer model of integrated processing for narrative comprehension.
Cambridge, Mass., MIT Press, 1983.

Horowitz, E. and Sahni, S.
Fundamentals of data structures in Pascal.
Rockville, Md., Computer Science Press, 1984.

Levinson, Stephen C.
Pragmatics.
Cambridge, University Press, 1983.

McNamara, John E.
Technical aspects of data communication. 2nd ed.
Bedford, Mass., Digital Press, 1982.

(Journal)
New generation computing.

Pratt, Terrence W.
Programming languages:design and implementation. 2nd ed.
Englewood Cliffs, N.J., Prentice-Hall, 1984.

Pylyshyn, Zenon W.
Computation and cognition: toward a foundation for cognitive science.
Cambridge, Mass., MIT Press, 1984.

Schank, R.C. and Riesbeck, C.K., eds.
Inside computer understanding: five programs plus miniatures.
Hillsdale, N.J., Lawrence Erlbaum, 1981.

Sedgewick, Robert.
Algorithms.
Reading, Mass., Addison-Wesley, 1984.

Symposium on Foundations of Computer Science.
Foundations of computer science.
1984, the 25th.

Stephanie Johnston

Technical Reports Recently Received in the Computer Library

Carnegie-Mellon University, The Robotics Institute

Fuhrman, M. and Kanade, T.	Design of an optical proximity sensor using multiple cones of light for measuring surface shape. TR-84-17, April 1984.

Urbana, University of Illinois

Berman, Aryeh.	Ramteklib: low-level library package for the Ramtek 9460 graphic display system. 84-1175, May 1984.
Plaisted, David A.	Constructs for sets, quantifiers, and rewrite rules in LISP. 84-1176, June 1984.

University of Newcastle upon Tyne

Elphick, M.J., ed.	Man-machine interaction. 1983.

Marina del Rey, University of Southern California.

Bates, R.L., et al.	Recent developments in ISI-Interlisp. ISI/RS-84-131, August, 1984.
Mockapetris, P., et al.	Name server design for distributed systems. ISI/RS-84-132, June 1984.

Stanford University

Ketonen, J. and Weening, J.	EKL -- An Interactive proof checker user's manual. 84-1006, June 1984.

Detroit, Wayne State University

Kampfner, Roberto R.	Formal specification of information systems requirements. 84-004, August 1984.

Palo Alto, Xerox Corporation.

Teitelman, Warren.	The Cedar programming environment: a midterm report and examination. CSL-83-11, June 1984.

Stephanie Johnston

Consulting and Enquiries

Advising Supervisor	Terry Jones	MP345	4757
External Marketing Consultant	Ihor Prociuk	MP350	6875
Erindale College	Peter Wall	2035	828-5311
Scarborough College	William Barek	S626	284-3173

General Enquiries	Dale Wright	EA206	4990
Account & Access Code Enquiries (U of T)	Agatha Stevens	MP337	8703
Account & Access Code Enquiries (External)	Sylvia May	MP337	7148
Tape Library (Academic Services)	Stella Martin	MP368	7319
Tape Library (Administrative Services)	Miranda Fong	MP368	6693
U of T Computer Library	Stephanie Johnston	EA206	2987

Central Advising Office (Appointments)	HELP	300 Baud Interactive Services	6200
Central Advising Office (Phone-in)	HELP	1200 Baud Interactive Services	3959
Microcomputer Support Group	5071	DATAPAC	4320, 0056
Numerical/Statistical Advising	STAT	Telenet	0302043200056
System Status Enquiries (DEC)	4318	Tymnet	<backspace> DPAC;302043200056
System Status Enquiries (IBM)	7393		

UTCS Directory

Director	Dr. Warren Jackson	MP350	8948
Associate Director	Eugene Siciunas	MP350	5058
Budget Analysis Supervisor	Marg Doherty	MP350	8697

Managers

Communications & Technical Support	Norman Housley	SF4306	4967
Internal Systems & Administration	Ron Vander Kraats	MP350	4428
Operations	Dr. Bob Chambers	MP350	7092
Systems	Bill Lauriston	MP331	3579
User Interface	Don Gibson	MP350	7331

Committees on Computing

UTCS Board	Chairman	Prof. D.M. Nowlan	4984
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Committee on Computer Networks & Telecommunications	Chairman	Mr. A. Heyworth	4936
Committee on Computing Facilities & Services	Chairman	Prof. J.D. Bossons	8626
Natural Language Processing Steering Committee	Chairman	Prof. I. Lancashire	828-5273
UTCS Users' Committee	Chairman	Prof. J.C. Hurd	3056
	Secretary	Ms. C. Pereira	4463

UTCS Terminal and Advising Sites

Names and Locations

- **Central Advising Office (CAO), 978-HELP**
- **Education Facility (Educ),** McLennan Labs, 60 St. George St., Room 221
- **Engineering Annex (EAT, EUT, CDF),** 11 King's College Road, Rooms 103, 104, 107, 107B, 201, 203.
- **Erindale College (Erin), 828-5339,** Mississauga Road, Erindale Campus, Rooms 2005, 2039, 2045
- **Robarts,** Robarts Library, 130 St. George St., Room 1061A
- **Scarborough College (Scar), 284-3122,** Military Trail, Scarborough Campus, Rooms S624, S625, S627, S628, S628A
- **Sidney Smith (AST & ASUT),** 100 St. George St., Rooms 1071, 1073, 2104, 2105
- **St.Michael's College,** 121 St. Joseph St., Room 101
- **Trinity College,** 6 Hoskins Ave., Room 024
- **Victoria University,** 73 Queens Park Cres., Room 005.

Sites	Hours of Operation				Restrictions*	Advising
	Mon-Thurs	Fri	Sat	Sun		
AST	8:00-22:00	8:00-22:00	8:00-22:00	8:00-22:00	Research	978-HELP
ASUT	7:00-24:00	7:00-24:00	7:00-24:00	7:00-24:00	BICS	Arranged by Dept.
CAO	10:00-18:00	10:00-18:00	closed	closed	Research	978-HELP
CDF	24 hrs	24 hrs	24 hrs	24 hrs	Under	No
EAT	24 hrs	24 hrs	24 hrs	24 hrs	Research	Rm 106
Educ	24 hrs†	24 hrs†	24 hrs†	24 hrs†	Research**	978-HELP
(outer)	24 hrs†	24 hrs†	24 hrs†	24 hrs†	Research	978-HELP
Erin (2039)	9:00-17:00	9:00-17:00	24 hrs	24 hrs	Research	Rm 2005
(2045)	24 hrs	9:00-17:00	24 hrs	24 hrs	Undergrads	Rm 2005
EUT	24 hrs	24 hrs	24 hrs	24 hrs	BICS	Rm 107B
Robarts	8:30-24:00	8:30-24:00	9:00-17:00	13:00-22:00	BICS, Micros	Arranged by Dept.
Scar	9:00-24:00	9:00-24:00	10:00-17:00	closed	Research	Rm S624, S626
					Undergrads	Rm S624
St.Michael's	24 hrs	24 hrs	24 hrs	24 hrs	None	Arranged by College
Trinity	8:00-22:00	8:00-22:00	8:00-22:00	8:00-22:00	None	Arranged by College
Victoria	8:30-23:00	8:30-23:00	closed	closed	None	Arranged by College

* Research includes graduates, faculty, staff. ** May be unavailable due to UTCS courses.
† Building open Mon. - Thurs. 7:00 - 22:00, Fri. 7:00 - 17:00. Building closed Sat. & Sun.

Advising Hours

CAO	Monday through Friday, 10:00 - 18:00
EAT	Monday through Friday, 13:00 - 17:00 (Oct. - mid Dec., Jan. - Apr.)
Scar	Monday through Friday, 09:00 - 17:00
Erin	Mon. 09:00-17:00, Tues.-Thurs. 09:00-20:00, Fri. 09:00-17:00, Sat.-Sun. 12:00-16:00.

Services Available

(Y=yes, N=no)

	BICS	Keypunch	PACX	Printers	Writer's Workbench	Network Terminal Server	DCS Micros
AST	N	N	N	Y	N	Y	N
ASUT	Y	N	N	Y	N	N	N
CDF	N	N	N	Y	N	N	N
EAT	N	Y	N	Y	N	Y	N
Educ	N	N	Y	N	N	N	N
Erin	N	N	Y	Y	Y	N	N
EUT	Y	N	N	N	N	N	N
Robarts	Y	N	N	Y	Y	N	Y
Scar	Y	N	Y	Y	N	N	N
St.Michael's	Y	N	Y	Y	N	N	Y
Trinity	Y	N	N	Y	N	N	N
Victoria	Y	N	Y	Y	N	N	N

UTCS and Managed Systems

UTCS Systems

3033/N12 Processor

- located in McLennan Physical Laboratories
- provides General Purpose Job Stream, TSO, WYLBUR, APL
- 12 megabytes of memory
- MVS with JES2

3033/U16 Processor

- located in McLennan Physical Laboratories
- provides instructional access using BICS
- 16 megabytes of memory
- UTS (modified UNIX Seventh Edition) under VM/370

DECsystem-10 Model 1090

- located in McLennan Physical Laboratories
- provides General Purpose Time-Sharing
- 512 K - 36 bit words of memory
- TOPS-10 operating system, version 7.02
- GALAXY queuing, spooling, and Batch subsystem, Version 4.1

"Hub VAX" (11/750)

- located in McLennan Physical Laboratories
- VMS
- acts as a communications gateway between UNIX, VMS, and MVS operating environments
- 4 megabytes of memory

GP UNIX

- located in McLennan Physical Laboratories
- provides General Purpose Timesharing using UNIX
- typesetting hardware (CAT/8), and (Varian) for previewing output

Communications & Technical Support

- located in Sandford Fleming Building, Fourth Floor
- Communications Group provides communications systems, terminals, modems, data channels: consulting and installation.
- Field Service Group installs and maintains small computer systems on a contract basis or on a cost-per-call basis.
- provides consulting on minicomputers; configures and installs minicomputer systems

Microcomputer Facility

- located in McLennan Physical Laboratories
- provides consulting on microcomputer systems
- offers media conversion services
- Machines include:
  IBM Personal Computer, PC/XT & PC Jr., APPLE IIe,
  Macintosh, S-100 CP/M System,
  Osborne 1, Eagle Spirit,
  plus a variety of others on loan from suppliers

Facilities UTCS Manages & Operates

4341 Mod II Processor

- located in McLennan Physical Laboratories
- provides administrative IMS/VS, DB/DC, Batch and TSO
- 16 megabytes of memory
- MVS with JES2

PDP-11/70 SAS UNIX

- located in McLennan Physical Laboratories
- provides UNIX Statistical Analysis Service (Dept. of Statistics only)
- 4 megabytes of memory
- UNIX Seventh Edition

Computer Disciplines Facility

VAX-11/750 (4 megabytes of memory)
VAX-11/750 (2 megabytes of memory)
VAX-11/780 (4 megabytes of memory)

- located in Engineering Annex
- provide Computer Science interactive access
- UNIX (Berkeley Unix 4.2BSD)

Scarborough College Systems

VAX-11/750 (5 megabytes of memory)
VAX-11/750 (2 megabytes of memory)

- provides instructional access using UNIX (Berkeley Unix 4.2BSD)

Erindale College Systems

VAX-11/780 (4 megabytes of memory)

- provides instructional access using VMS
- Research access

VAX-11/750 (5 megabytes of memory)

- provides instructional access using UNIX (Berkeley Unix 4.2BSD)

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